Graduate Level Research Methods and Statistics Courses: The Perspective of an Instructor

Sean W. Mulvenon, University of Arkansas, Fayetteville, AR, USA
Victor C. X. Wang, Florida Atlantic University, Boca Raton, FL, USA

ABSTRACT
The goal of an educational system or degree program is to “educate” students. This immediately raises the question of what does it mean to “educate” students. All academic institutions, degree programs and content areas are typically expected to answer this question and establish appropriate academic expectations both within the classroom and as part of their specific academic programs. The theme of this special edition is to provide insight on the challenges of improving graduation rates in both undergraduate and graduate education. As a statistics professor, on many occasions the authors have been part of both college and university committees on research methodology, statistics, and other academic requirements associated with graduate education. The purpose this article is to provide an overview of these experiences and the authors’ perspective on how to improve success of students in methodology and statistics courses associated with successfully completing a graduate degree.

Keywords: Education, Graduate Level, Methodology, Research, Statistics

INTRODUCTION
I will always remember my first year as a professor at the University of Arkansas as defining and challenging my convictions of what represented effective graduate education. During the fall of 1995, I was challenged with improving the quality of the research methodology on master’s projects, doctoral dissertations, grant submissions and publications generated within the College of Education and Health Professions (COEHP). As I reflect on the last 20 years, I recognize the challenges present in 1995 are in many ways still present today, and in some situations, even more pronounced. I am glad to add Dr. Victor C. X. Wang as a coauthor of this article as he will make some final edits of this article and other articles for this issue. In addition, he graduated from COEHP with two graduate degrees in 2002 and he is in a good position as a coauthor to add his much needed insights.

A goal with writing any manuscript is to eliminate or minimize your personal opinions, perspectives, and “pet” theories while concurrently drawing on personal experiences in outlining an academic position. The present manuscript may be more difficult than most in my career.
because I will be providing specific examples from personal experiences. During my tenure at the University of Arkansas I have developed a more global perspective of the challenges associated with graduate education programs which has resulted in two more philosophical questions: (1) how do we continue to improve delivery of graduate education and (2) are graduate degrees to be earned at the highest academic level or have they become an academic entitlement?

As a premise to this discussion, I will make the global declaration that all degrees should be “earned” and will not discuss or debate this position further. I have a difficult time envisioning any situation where someone would argue the untenable position that a graduate degree does not need to be “earned.” The question of a graduate degree as an entitlement creates a different discussion, with many people interpreting the use of this term as provocative or offensive.

The purpose of this article will be to present various experiences, scenarios, and examples of data to demonstrate my perspective that a significant challenge to effective graduation in 2015 is the transition from the belief that degrees are to be earned to one where they are perceived as an entitlement. The use of the term entitlement is purposeful and designed to invoke a passionate response by the reader. Academe represents a unique situation in our society where people will happily pay more and demand less in return. How many people complain when they pay for a supersized coke and only get a medium? A segue for the next section is to share that I have never been requested to raise academic expectations for any of my methodology or statistics courses. However, I have routinely been asked to lower, modify, or remove exams and required research projects in these courses which attenuates the overall value of the course. Is supersized as the product demanded only important at McDonalds?

OVERVIEW OF GRADUATE DEGREES IN COLLEGES OF EDUCATION

A longstanding theory in education is a belief that better educated teachers will translate to greater student achievement and performance in the classroom (Croninger, Rice, & Rathburn, 2007; Ryan, 2008). At face value, this theory seems tenable with the notion more educated instructors will be better able to inform young minds (Brewer & Goldhaber, 2000). However, is this theory really tenable? So many factors may contribute to overall academic preparation of educators and administrators. And it is an oversimplified remedy to suggest we can improve the academic preparation of educators, both teachers and administrators, by having them complete graduate course work or degrees without concurrently evaluating the academic expectations of both.

What are key elements that represent appropriate or excellent academic preparation? A study in 2006 at the University of Arkansas reported the undergraduate GPA in the College of Education and Health Professions as 3.51 on a 4.0 scale. The averaged undergraduate GPA for the University of Arkansas was 2.77. Additionally, the average ACT composite score was 25.6 for the university, but only 23.3 for the College of Education and Health Professions (University of Arkansas Faculty Senate Task Force, 2006). Is the undergraduate GPA or the average ACT score more representative of the academic preparation or ability of students? Again, this depends on the context and use of both the undergraduate GPA and ACT scores. However, on average at the University of Arkansas education majors had the highest GPA’s and the lowest ACT scores.

ACADEMIC COGNITIVE DISSONANCE

A challenge in teaching graduate level statistics courses with educators, which I attribute to the incongruent relationship of a higher GPA’s and lower standardized test scores for many educators,